

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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MAR 29 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Amendment of Part 90 of the
Commission's Rules to Adopt
Regulations for Automatic
Vehicle Monitoring Systems

ET Docket No. 93-61

To: The Chief, Private Radio Bureau

REPLY COMMENTS OF
THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

The American Radio Relay League, Incorporated (the League), the national association of amateur radio operators in the United States, by counsel and pursuant to the Order, DA 94-252, released March 18, 1994 by the Deputy Chief, Land Mobile and Microwave Division, Private Radio Bureau, hereby respectfully submits its reply to those comments submitted with respect to the written ex parte presentations from PacTel Teletrac (PacTel) Southwestern Bell Mobile Systems, Inc. (SBMS) and Mobilevision concerning the licensing of Automatic Vehicle Monitoring Systems (AVM) currently

004

under consideration in this docket.¹ In reply to the comments of PacTel filed March 15, 1994, the League states as follows:

1. The League has objected strenuously in this proceeding to the Commission's proposed usurpation of the entirety of the 902-928 Mhz band for LMS systems, an expansion of the band occupancy permitted for AVM systems under the current (interim) rules. Perhaps due to the fact that AVM systems have not occupied the 902-903 and 912-918 Mhz segments of the 902-928 Mhz band, amateurs have been able to share the band with AVM stations operating under the interim rules since 1985, when amateurs were first given access to the band. Amateur use of the band has been growing since then. It has become an important segment for amateur weak-signal experimentation (at 902-903 MHz) and for amateur television (at 912-918 MHz) due to saturation of the lower UHF and VHF amateur allocations, and because of regulatory changes which have deprived amateurs of significant amounts of spectrum at 220-222 MHz and at

¹ The League originally submitted comments and reply comments in this proceeding, in response to the Notice of Proposed Rule Making, FCC No. 93-61, 8 FCC Rcd. 2052 (1993), amended by Erratum, DA 93-516, DA 93-516, 8 FCC Rcd. 3233 (1993), released April 9, 1993 (the Notice). Then, after the Commission received written ex parte presentations from PacTel, SBMS and Mobilevision in January and early February of this year, the Private Radio Bureau issued a public notice soliciting additional comments on the subjects of those ex parte filings. Public Notice, DA 94-129, 59 Fed. Reg. 7239 (February 15, 1994). The time was extended thereafter for the submission of comments and reply comments. Order, DA 94-178, 59 Fed. Reg. 10107 (March 3, 1994), and Order, DA 94-242, 59 Fed. Reg. 13920 (March 18, 1994).

420-430 MHz.² These points were raised previously in the League's comments.

2. The comments of PacTel, filed March 15, 1994, attempt to justify what PacTel's ex parte filing termed a "compromise" proposal, which would require two wideband LMS systems to share 10 MHz of spectrum, between 902 and 912 MHz, and to permit narrowband LMS over the remainder. The comments make reference to protection under this scheme for Government users, Part 18 ISM devices, and for Part 15 devices operating above 912 MHz. There is no proposal whatsoever for accommodation of ongoing amateur operations at 902-904 MHz, however. Neither does the proposal exempt the 912-918 MHz segment from LMS operation. While the proposal for sharing ten MHz by two wideband systems is indeed a step in the right direction, the frequency configuration is simply not acceptable to the Amateur Service, and ignores existing users of the band.

3. PacTel notes that it continues to prefer the 2-8-6-8-2 band segmentation proposed in the Notice in this proceeding. The League favors continuation of that segmentation as well, to the extent that it is modified to exempt the first "2" and the "6" from any LMS operation, as has been the case all along. Exemption of those segments from AVM operation has thus facilitated the development of

² It is worth reminding the Commission that in implementing some of these regulatory changes which caused the Amateur Service to lose access to large portions of spectrum below 900 MHz, the Commission justified those changes in large part on the basis of the continued availability to the Amateur Service of the spectrum at 902-928 MHz. See the Memorandum Opinion and Order, 4 FCC Rcd. 6407, at 6410-11 (1989).

amateur operation in the band since 1985. However, if, as Teletrac suggests, two wideband systems can share 6.5 MHz for mobile-to-base-station transmissions, and three MHz per system is required for wideband forward links, narrowband forward channels or additional return links it would appear that there is a possibility of configuring such systems to exempt the 902-904 and 912-918 MHz segments without burdening the development of wideband LMS systems.

4. Most objectionable in the PacTel "compromise" proposal is the suggested creation of a 500 kHz segment between 902 and 902.5 MHz for upper band systems requiring narrowband forward channel utilization. Such a configuration would completely preclude the continued operation of expensive, extremely sensitive amateur weak-signal stations which operate between 902 and 904 MHz. This, and the entire channelization proposal contained in the PacTel ex parte comments points up the extent to which existing users of the 902-918 MHz band will be disrupted by the expanded AVM/LMS systems proposed to be permitted to operate in the entirety of the band. It poignantly explains the need to protect continued operations. Just as the Part 15 users justifiably feel as though the Commission has encouraged the development of products which use 902-928 MHz and now proposes, just four years later, to make the continued operation of those devices difficult or impossible in the band, the Amateur Service has been served no better. The utility of the 902-928 MHz band to the Amateur Service, under either the Notice proposal or the PacTel "compromise", is greatly reduced, if not eliminated.

5. The League filed a Petition for Rule Making on January 13, 1994, which requested the creation of a primary allocation for the Amateur Service at 902-904 MHz and at 912-918 MHz in the United States and possessions in ITU Regions 1 and 2, but with certain geographical limitations, to protect government use of the band. This petition has not yet been given a file number. A copy of that petition is attached hereto as Exhibit A, by way of a counterproposal to the channel configuration contained in the PacTel "compromise." By the petition, the League seeks to preserve the ability to continue amateur access to segments of the band which have not interfered with AVM use of the band to date, and which are critical to the development and continuation of specialized communications techniques in the band. The relief requested in the petition will not prejudice the development of AVM/LMS systems, or have any effect on Part 15 electronic product development in the band.

Therefore, the foregoing considered, the American Radio Relay League, Incorporated respectfully requests that the Commission not adopt the channel configuration for AVM/LMS systems proposed in the PacTel comments recently filed. Rather, the Commission should protect the existing amateur operation in the 902-928 MHz band, and

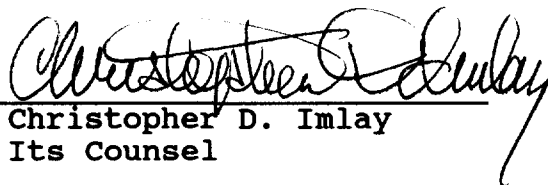
especially those specialized communications techniques at 902-904 MHz and at 912-918 MHz, in accordance with the League's Petition for Rule Making.

Respectfully submitted,

THE AMERICAN RADIO RELAY
LEAGUE, INCORPORATED

225 Main Street
Newington, CT 06111

By


Christopher D. Imlay
Its Counsel

BOOTH, FRERET & IMLAY
1233 20th Street, N. W.
Suite 204
Washington, D. C. 20036
(202) 296-9100

March 29, 1994

EXHIBIT A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Amendment of Sections 2.106 and)
97.303(g)(1) of the Commission's)
Rules to Create a Primary)
Allocation in the 902-928 MHz)
Band for the Amateur Service)

RM-_____

To: The Commission

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JAN 13 1994
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

PETITION FOR RULE MAKING

THE AMERICAN RADIO RELAY
LEAGUE, INCORPORATED
225 Main Street
Newington, CT 06111

Christopher D. Imlay
BOOTH, FRERET & IMLAY
1233 20th Street, N. W.
Suite 204
Washington, D. C. 20036

January 13, 1994

SUMMARY

The American Radio Relay League, Incorporated (the League), the national non-profit association of amateur radio operators in the United States, requests that the Commission issue a Notice of Proposed Rule Making looking toward the amendment of Section 2.106 of the Commission's Rules (Part 2, Subpart B, Table of Frequency Allocations), 47 C.F.R. §2.106, Footnote US275 thereof; and Section 97.303(g)(1) of the Amateur Service rules, to provide for a primary allocation for the Amateur Service at 902-904 MHz and 912-918 MHz in all of the United States and its possessions, but with certain geographical limitations, and except in the United States possessions in ITU Region 3.

The variety of users in the 902-928 MHz band illustrates an historical lack of significant spectrum planning in that segment. The principal non-government, licensed users are Automatic Vehicle Monitoring systems, followed by radio amateurs. The Commission has recently proposed certain Part 90 changes which would, as a practical matter, jeopardize the continued availability of the 902-904 MHz and 912-918 MHz segments of the band by a significant expansion of the available frequencies for AVM/LMS systems. The Commission has also proposed to amend the Table of Allocations to permit non-government wind profilers in the band, centered at 915 MHz.

The League seeks, by this petition, to preserve the ability to continue amateur access to segments of the band which have not interfered with AVM use thereof, and which are critical to the development and continuation of specialized communications techniques in the band. The Amateur Service has among its bases and purposes the continuation and extension of the amateur's ability to contribute to the advancement of the radio art, the advancement of skills in the technical phases of communications technology, and the expansion of the existing reservoir of trained operators, technicians and electronics experts. The relief requested herein will not prejudice the development of AVM/LMS systems or wind profiler systems, nor will it discourage electronic product development in the band. It will merely preserve the ability of amateurs to continue present uses in the 8 MHz proposed for non-government primary allocation status.

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)	
)	
Amendment of Sections 2.106 and)	
97.303(g)(1) of the Commission's)	
Rules to Create a Primary)	RM- _____
Allocation in the 902-928 MHz)	
Band for the Amateur Service)	

To: The Commission

PETITION FOR RULE MAKING

The American Radio Relay League, Incorporated (the League), the national non-profit association of amateur radio operators in the United States, by counsel and pursuant to Section 1.401 of the Commission's rules (47 C.F.R §1.401), hereby respectfully requests that the Commission issue a Notice of Proposed Rule Making at an early date looking toward the amendment of Section 2.106 of the Commission's Rules (Part 2, Subpart B, Table of Frequency Allocations), 47 C.F.R. §2.106, Footnote US275 thereto, and Section 97.303(g)(1) of the Rules governing the Amateur Services, so as to provide a primary allocation for the Amateur Service at 902-904 MHz and 912-918 MHz in all of the United States and its possessions, but with certain geographical limitations, and except in the United States possessions in ITU Region 3. As justification therefor, the League represents as follows:

I. Introduction

1. The 902-928 MHz band has been available for amateur radio use generally in the United States since 1985. With a few geographical limitations,¹ the entire band has been available for use, and has been used increasingly, by United States amateurs since then, especially at 902-904 MHz and at 912-918 MHz. The band was allocated on a secondary basis for amateur use in PR Docket 84-960 (58 RR 2d 1073), per Footnote US 275 to the Table of Frequency Allocations.² Since that time, the segment 902-904 MHz and the segment 912-918 MHz have each been used significantly for amateur

¹ See Footnote US 267 to the Table of Allocations, which prohibits amateur radio station operation in the 902-928 MHz band in Colorado or Wyoming in certain segments. The restriction formerly prohibited all amateur operation in the band in those two states. However, this was waived in 1990 to the extent that operation is permitted in certain segments within 902-904 MHz and 925-928 MHz. Moreover, the band is available for amateur use only in ITU Region 2.

² Footnote U.S. 275 states as follows, with respect to the 902-928 MHz band:

US275 The band 902-928 MHz is allocated on a secondary basis to the amateur service subject to not causing harmful interference to the operations of Government stations authorized in this band or to Automatic Vehicle Monitoring (AVM) systems. Stations in the amateur service must tolerate any interference from the operations of industrial, scientific and medical (ISM) devices, AVM systems and the operations of Government stations authorized in this band. Further, the Amateur Service is prohibited in those portions of Texas and New Mexico bounded on the south by latitude 31° 41' North, on the east by longitude 104° 11' West, on the north by Latitude 34° 30' North, and on the west by longitude 107° 30' West. In addition, outside this area but within 150 miles of White Sands Missile Range the service is restricted to a maximum transmitter peak envelope power output of 50 watts.

weak-signal propagation experimentation and television operation, respectively. These amateur uses in particular have become firmly established in those respective band segments, and the amateurs active in those band segments especially have come to depend on them for regular communications using these specialized communications modes. Indeed, restrictions on, or difficulties with television operation in other bands, have made the continued use of the 902-928 MHz band increasingly important for amateur operation. The differences between and among the various VHF and UHF amateur allocations necessitate a small weak-signal subband in each band for propagation research. The rapid increases in amateur use of 902-928 MHz for these purposes, coupled with current, apparently unplanned allocation proposals which would significantly detract from the ability of amateurs to continue to utilize 902-904 MHz and 912-918 MHz on a secondary basis, together necessitate a primary allocation for the Amateur Service in at least these two segments of the band. The petition is timely under the circumstances.

II. Background

2. Prior to the 1979 World Administrative Radio Conference (Geneva, 1979) (WARC-79), the 902-928 MHz band was allocated in Region 2 to the fixed and radiolocation services on a primary basis. Industrial, scientific, and medical (ISM) applications were authorized. The Commission had, by the end of 1974, adopted interim

rules for the operation of the then-nascent AVM service in the band as well.³

3. At WARC-79, the United States proposed, and obtained concurrence on, the addition of mobile (except aeronautical mobile) and amateur allocations. As discussed above, the band became available to amateurs on a secondary basis in 1985, following implementation decisions⁴ and the adoption of service rules.⁵ Domestically, Part 15 devices are permitted to operate in the band, at significantly high field strengths.⁶ The principal United States rationale at WARC-79 for the Region 2 amateur and mobile allocations at 902-928 MHz was to satisfy future requirements for services which do not require protection from interference.

4. The current primary allocation of 902-928 MHz is government (military) radiolocation, although that service must accept interference from ISM centered at 915 MHz.⁷ Government, non-

³ See, the Report and Order, Docket 18302, 30 RR 2d 1665 (1974).

⁴ See, the Second Report and Order, Gen. Docket 80-739, 49 Fed. Reg. 2357, released January 19, 1984.

⁵ See the Second Report and Order, PR Docket 84-960, 58 RR 2d 1073 (1985), supra.

⁶ See, 47 C.F.R. §§15.243, 15.245, 15.247 and 15.249.

⁷ See International Footnote 707: "In Region 2, the band 902-928 MHz (center frequency 915 MHz) is designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within this band must accept harmful interference which may be caused by these applications...".

military operation of radiolocation systems is authorized on a secondary basis to military radiolocation.⁸ After that, the hierarchy of allocations in the band is as follows: government fixed and mobile, including low power radio control operations on a secondary basis;⁹ non-government radiolocation (AVM systems);¹⁰ amateur radio, subject to the above-referenced minor geographic restrictions in footnotes US267 and US275;¹¹ and Part 15 devices.

5. There was, as of November of 1992, a total of 6,502 frequency assignments contained in the Government Master File (GMF) within 902-928 MHz. Of these, 6,131 (94%) were non-government entities. The majority of those were AVM systems. The remainder of the non-government assignments were basically for experimental purposes. These included electromagnetic compatibility of electronic components in automobiles and automotive electronic

⁸ See Footnote G59, 47 C.F.R. §2.106. According to NTIA Report No. 93-294, Federal Government Spectrum Usage in the 902-928, 2400-2500, and 5725-5875 MHz Bands (February, 1993) which discusses Government Spectrum Usage of the 902-928 MHz band, non-specific government services include space and experimental applications.

⁹ Footnote G11, 47 C.F.R. §2.106.

¹⁰ Footnote US218, 47 C.F.R. §2.106.

¹¹ Footnote US 275 states that "(T)he band 902-928 MHz is allocated on a secondary basis to the Amateur Service subject to not causing harmful interference to the operations of Government stations authorized in this band or to the Automatic Vehicle Monitoring (AVM) systems. Stations in the Amateur Service must tolerate any harmful interference from the operations of industrial, scientific and medical (ISM) devices, AVM systems, and the operations of Government stations authorized in this band..."

systems; indoor wireless LANs, developing AVM equipment, ground testing of satellite platforms, wind profiler technology development, and antenna pattern and gain tests. The Department of Defense (DOD), which is among the Federal agencies the largest user, has a combined 256 assignments. These involve a wide variety of uses: fixed, mobile, and aeronautical mobile.

6. Given this vast array of different current users of the 902-928 MHz band, the Commission, surprisingly, is currently considering the addition of yet another user. In Docket 93-59, the Commission has inquired whether there is a place for wind profiler radars in that band, occupying 12.5 MHz of bandwidth.¹² According to Radian Corporation, which manufactures wind profiler radar systems, the frequency range sought for wind profiler radars at 902-928 MHz is 908.75 to 921.25 MHz. Comments in that proceeding reveal that wind profiler radars in the vicinity of 915 MHz may be deployed in metropolitan areas.

7. In PR Docket 93-61, which is also currently pending, the Commission proposed, on its own motion, and without stated justification, to expand AVM operation at 902-928 MHz, not only qualitatively (to permit location of objects generally as well as automobiles) but quantitatively as well, to authorize operation of AVM and LMS systems on additional segments beyond those authorized

¹² See, the Notice of Proposed Rule Making and Notice of Inquiry, 8 FCC Rcd. 2546 (1993).

under current Part 90 rules.¹³ The present (interim) rules for AVM operation, set forth at 47 C.F.R. §90.239, permit AVM operation on the following frequency bands at 902-928 MHz: 903-904 MHz, 904-912 MHz, 918-926 MHz, and 926-927 MHz. In the petition for rule making (RM-8013) which formed the basis for the Docket 93-61 proceeding, North American Teletrac and Location Technologies, Inc. requested use of those same segments (i.e. two narrowband channels and two wideband, pulse-ranging channels)¹⁴ and no others. The Notice of Proposed Rule Making, however, without explanation, proposed a channelization plan that would encompass the entire 902-928 MHz band,¹⁵ and includes the frequencies 902-903 MHz and 912-918 MHz, for narrowband LMS systems. It is apparently not necessary to add these frequencies in order to accommodate narrowband LMS channels. No request was made by the petitioner for frequencies separate from the wideband (8 MHz) channels traditionally used at 904-912 MHz and

¹³ See the Notice of Proposed Rule Making, FCC 93-141, 8 FCC Rcd. 2502 (1993), amended by Erratum, DA 93-516, 8 FCC Rcd. 3233 (1993).

¹⁴ There was, in other words, no proposal by the petitioner in that proceeding to expand the frequency bands available for AVM operation. The frequencies 902-903 MHz, 912-918 MHz, and 927-928 MHz would, under the RM-8013 proposal, still have been excluded. In 1974, when the Commission established the interim rules for AVM operation, it specifically limited the use of the 904-912 MHz and 918-926 MHz bands to wideband operation. See the Report and Order, 30 RR 2d 1665, 1670 (1974). The Commission also designated the 903-904 MHz and 926-927 MHz segments for developmental narrowband operation. Id., 30 RR 2d at 1671. The 902-903 MHz and 927-928 MHz segments were specifically withheld. Id.

¹⁵ See the Notice of Proposed Rule Making, docket 93-61, 8 FCC Rcd. at 2504, 2505, paragraph 15.

918-926 MHz. The proposed additional use of 902-903 MHz and 912-918 MHz thus appears gratuitous, and is without justification in the Notice.¹⁶ Moreover, it signals a direct departure from the United States position going into WARC-79, to the extent that it is contrary to the premises for the allocation scheme: that there were services that could successfully share on a secondary basis that did not require protection from interference. The Commission now has proposed to amend Part 90 in such a way as to depart from the initial premises for mobile and amateur allocations in the band, that new non-government users may share the entire band without having to offer mutual protection from interference.

8. There is a large number of relatively high-powered Part 15 devices in the 902-928 MHz band, most of which are centered at 915 MHz. The liberal rules for permitted field strengths for

¹⁶ The frequency expansion proposed in Docket 93-61 for AVM systems is also inconsistent with the Commission's statement in an Erratum to the Notice of Proposed Rule Making in that proceeding. The Erratum, released May 5, 1993, changed (inter alia) the text of paragraph 24 of the Notice of Proposed Rule Making. As originally issued, the Notice had solicited comment as to whether, in order to accommodate LMS in the 902-928 MHz band, it would be necessary to remove Part 15 users and amateur radio operators from that band. The Erratum, issued at the joint request of representatives of the League, Part 15 users, and North American Teletrac, made it clear that the Commission absolutely does not intend to remove amateurs (or Part 15 devices) from the 902-928 MHz band or restrict amateur operations in the band, but rather seeks comment on solutions to sharing issues "short of removing from or restricting amateur operations in that band, or placing limitations on their use of the band." The clarification made it apparent that the Commission does not intend to permit the proceeding to be perceived as a means of adversely affecting the Amateur Radio Service. However, the proposed expansion of AVM or Location Monitoring Service (LMS) activity in the 902-904 MHz and 912-918 MHz bands would indeed have such an effect.

intentional radiators in the band, adopted at the time of the Commission's rewrite of Part 15, has encouraged the proliferation of such devices. Part 15 devices, however, have no allocation status, and are not properly considered in the context of frequency allocation decisions. As the Commission noted when it permitted Part 15 devices in the 902-928 MHz allocation in 1989:¹⁷

We continue to believe that there are many possible applications for Part 15 devices within these ISM bands. The fact that these frequencies may not be suitable for certain consumer devices is not a reason to prohibit Part 15 operation. We note that presently there are many Part 15 applications that are tolerant of interference or isolated from potential interference sources. We believe that manufacturers, if given the opportunity to use the ISM frequencies, will develop many new and practical uses of Part 15 devices. Thus, we will not restrict the use of these bands by Part 15 equipment because of the possibility of interference to that equipment by equipment operating under other rule parts.

4 FCC Rcd. at 3502.

III. Amateur Uses of 902-928 MHz

9. Amateur radio has been able to share the 902-928 MHz band with all of the above users, including the many AVM stations operating pursuant to the interim rules, since the inception of amateur use of the band in 1985. In the intervening time, amateur use of the band has been growing.¹⁸ Expansion of AVM/LMS and wind

¹⁷ See the First Report and Order, 4 FCC Rcd. 3493, at 3502 (1989).

¹⁸ In March of 1993, the League had a list of sixteen United States manufacturers of equipment for both narrowband, weak-signal amateur operation and for amateur television operation at 902-928 MHz. Most amateur equipment for the 902-904 MHz segment, however, is currently the result of individual and club projects. In the Rochester, New York area, for example, there are more than 20

profiler operation as proposed in the two pending Notices of Proposed Rule Making discussed above, however, would significantly reduce the utility of the band for the Amateur Service. The aggregate effect of the proposed expanded and new uses of the band, coupled with increases in the proliferation of Part 15 devices without any RF susceptibility information to consumers, stands to effectively deprive amateurs of the use of the band in the future. The deterioration in the use of the band comes at a time when the Amateur Radio Service is increasingly looking to the 902-928 MHz band in the face of substantial growth in the Amateur Radio Service¹⁹ and the concurrent saturation of the lower UHF and the VHF amateur allocations. The continued availability of the entire band for amateur use is critical to the development and expansion of various amateur uses. It is especially important to accommodate amateur weak-signal propagation experimentation and the development and enhancement of amateur television, which has developed in the 902-904 and 912-918 MHz segments.

amateur stations active with narrowband communications modes at 902-904 MHz using transverters designed and built by amateurs as a club project.

¹⁹ The Commission has just released new statistics concerning new licensees in the Amateur Radio Service. There are currently more than 630,000 licensees in the Amateur Service. In each of 1992 and 1993, there were approximately 50,000 persons licensed in the Service for the first time. This is up from less than 20,000 in 1984, and less than 30,000 each year from 1984 through 1990. The Amateur Service is attracting newcomers at historically high levels.

10. The Commission has repeatedly emphasized the continued availability of the 902-928 MHz band to the Amateur Radio Service when considering allocation decisions in other bands which adversely affect amateur radio.²⁰ As the result of those reallocation decisions, the Amateur Service has relied (and, with respect to weak-signal operation and amateur fast-scan television operation, has had no choice but to rely) on those representations. To significantly reduce the availability of the band for amateur use (by creating permanent service rules for operation of Part 90 uses which in effect reduce the utility of the band for amateurs),

²⁰ For example, in General Docket 87-14, the Commission justified the reallocation of the 220-222 MHz band from the Amateur Radio Service, in part, because of the ready availability to amateurs of additional spectrum at, inter alia, 902-928 MHz. The Commission stated, on reconsideration in that proceeding, that:

Further, we note that in some areas, such as southern California, it may be necessary to begin moving some operations to higher frequency bands, such as the 902-928 MHz amateur band (sic).

A number of amateur interests challenge the Commission's statement in the Report and Order that the 2 MHz from 220-222 MHz represents less than a 2% reduction in amateur spectrum. We believe this statement is fair and correct. In making this statement, the Commission included only amateur bands that are capable of supporting operations similar to those in the 220 MHz region. These bands...(including) 902-928 MHz, provide (a total of) 128.7 MHz of spectrum to the amateur service, of which 2 MHz represents less than 2%. We recognize that some of these bands are shared bands; however, all are available and used by the amateur service.

Further, we believe the 902-928 MHz band provides a significant opportunity for the growth of packet radio...The amateur band plan for 902-928 MHz provides two 3 MHz channels for packet radio.

Memorandum Opinion and Order, 4 FCC Rcd. 6407 (1989)

would constitute a breach of the Commission's previous assurances to the Amateur Service as to the continued availability of the band. Diminution of the usefulness of the band would ill-serve the public, which benefits from public service communications provided by amateur radio, and it would disserve amateur radio licensees themselves. Indeed, the Commission appears to have established as a policy matter that its specific intention with respect to the 902-928 MHz band is to enact rules for LMS that do not remove Part 15 users and amateur radio operations from the band, restrict where such users could operate in the band, or place stricter limitations on the operation of such users in the band."²¹ Given this, the Commission must, by the same token, affirmatively act so as to protect the availability of the band for those same users, in order to implement adequate sharing arrangements, for the accommodation of potentially conflicting users.

11. In 1989, the League adopted a band plan for the 902-928 MHz allocation. Therein, the 902-903 MHz segment was intended for weak-signal communications and propagation experimentation. It has come since then into regular use for that purpose, and significant narrowband operation is regularly conducted in that segment. The segment 903-909 MHz was set aside in that band plan for digital modes and voice repeater outputs; 909-915 MHz for amateur television (ATV); 915-918 MHz for digital modes; 918-921 MHz for repeater inputs; 921-927 MHz for ATV; and 927-928 MHz for FM

²¹ See Footnote 16, supra.

simplex and links. While the use of the band for FM voice communications began slowly in the late 1980s when the band first became available, it is now on the increase. ATV use of the band, is quite widespread at present, and growing fast. One reason for this increase is the loss along Line A of the 420-430 MHz band,²² formerly heavily used by amateurs in northern cities for ATV operation. Below line A, the segments of the 420-450 MHz band available for ATV are congested, especially in metropolitan areas. Other than 420-450 MHz, the lowest frequency with a significant opportunity for ATV operation is the 902-928 MHz band. It is thus the primary source of spectrum for amateur television operation.

12. The extensive development of AVM in the Los Angeles area has resulted in a locally adopted band plan intended to work around AVM operation there. This band plan, adopted by the local amateur community via the frequency coordinator there, accommodates heavy amateur use of the 902-903 MHz segment for weak signal operation, point-to-point links, and repeater input operation. The 912-918 MHz segment is heavily used for digital wideband, ATV simplex and ATV repeater operation. The 927-928 MHz segment is used for digital wideband operation and repeater output and link operation. This is an example of the sharing arrangements necessary for the accommodation of other users with expanding spectrum needs in a

²² The entire segment 420-430 MHz was removed as an amateur allocation north of Line A in Docket 80-739, by the addition of Footnote NG 135 to 47 C.F.R. §2.106. The frequencies were actually removed from amateur use in Docket 84-960. See the Second Report and Order, supra, 58 RR 2d at 1074 (1985).

crowded RF environment. It reveals the difficulty in accommodating any expansion of the frequencies available for, as examples, AVM/LMS and wind profiler radars, and the purposes to be served by the technologies; all without significant impairment of amateur use of the band. There must, given the changes in the ground rules for sharing in the 902-928 MHz band, be at least some protected area for the most critical amateur uses of the band, weak-signal narrowband operation and amateur television. The instant proposal, to allocate on a primary basis two small segments of the 902-928 MHz band used for weak-signal operation and television operation by amateurs, is no more than a means of insuring that existing operations, to which those portions of this specific frequency band are uniquely important, can continue unimpaired in the future, notwithstanding increases in other, non-amateur uses of the band.

13. In November of 1992, the League filed comments in NTIA Docket 950532-2132, which proceeding addressed current and future requirements of various services for the use of radio frequencies in the United States. In that proceeding, the Assistant Secretary for Communications and Information of NTIA asked specifically for information as to the amount of spectrum required by various radio services. With respect to the 902-928 MHz band, the League stated:

The amateur service seeks continued access to the band 902-928 MHz, with [at least] the band 902-903 MHz [elevated to] primary and the band 903-928 MHz as secondary. This band is allocated to the amateur service on a secondary basis. It is useful to the amateur service despite its being an ISM band, and being shared with automatic vehicle monitoring (AVM) and low power (Part 15) devices.

The League suggested that, at a minimum, the status of the Amateur Radio Service at 902-903 MHz should be co-primary among non-government users. This request was made prior to the initiation of the AVM/LMS proceeding, which, for the first time, proposes to open the segment 912-918 MHz to AVM/LMS operation, and preclude the development of amateur television there to a large extent.

IV. Conclusion

14. The variety of users in the 902-928 MHz band illustrates an historical lack of significant spectrum planning in that segment. The principal non-government, licensed users are Automatic Vehicle Monitoring systems, followed by radio amateurs. The Commission has recently proposed certain Part 90 changes which would not change the Part 2 allocation of the band, but would as a practical matter, if implemented, jeopardize the continued availability of the 902-904 MHz and 912-918 MHz segments of the band by a significant expansion of the available frequencies for AVM/LMS systems. To a lesser extent, the Commission has also proposed to amend the Table of Allocations to permit non-government wind profilers in the band, centered at 915 MHz. The League seeks, by this petition, to preserve the ability of radio amateurs to continue access to segments of the band which have not interfered with AVM use thereof, and which are critical to the development and continuation of specialized communications techniques in the band. The Amateur Service has among its bases and purposes the continuation and extension of the amateur's ability to contribute to the advancement of the radio art, the advancement of skills in